

What is claimed is:

1. A turbocharger bearing assembly disposed in a housing for rotatably supporting a rotary shaft of a turbocharger, comprising:

a substantially cylindrical inner ring fitted on an outer periphery of the rotary shaft and formed with inner raceways on its outer periphery at places adjacent to opposite ends thereof;

a pair of outer rings mounted to the housing as spaced away from each other with respect to an axial direction of the rotary shaft and formed with outer raceways on their inner peripheries in opposing relation with the inner raceways;

a plurality of rolling elements rollably interposed between the respective inner raceways of the inner ring and the respective outer raceways of the outer rings;

a pair of sleeves interposed between the outer rings as defining a gap therebetween and opposing each other with respect to the axial direction of the rotary shaft, the sleeve formed with an engaging portion on its outer periphery for restricting its rotation relative to the housing and the outer ring; and

a spring interposed between these sleeves for spring biasing the outer rings via the sleeves in axially outward directions with respect to the rotary shaft, thereby applying a preload to the bearings.

2. A turbocharger bearing assembly according to Claim 1, wherein the sleeve is formed from a resin material and the sleeve and the outer ring are integrally formed.

3. A turbocharger bearing assembly according to Claim 1 or 2, wherein

an annularly notched step portion is formed on an inner periphery of the sleeve at an inside end thereof with respect to the axial direction of the rotary shaft.

4. A turbocharger bearing assembly according to any one of Claims 1 to 3, wherein the inner periphery of the sleeve and the outer periphery of the inner ring cooperate to constitute a labyrinth seal having a gap of 0.5mm or less.

5. A turbocharger bearing assembly according to any one of Claims 1 to 4, wherein the inner ring is formed with a recess on the inner periphery thereof for defining a gap between itself and the rotary shaft, the recess extended across a required axial range.